

Attorney Docket No. LEAP:125US
U.S. Patent Application No. 10/810,773
Reply to Office Action of March 31, 2006
Date: June 30, 2006

Current Status of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A microscope stage assembly, comprising:
 - a stage;
 - first engagement means for a microscope stage drive mechanism at a first location on said stage; and,
 - second engagement means for said microscope stage drive mechanism at a second location on said stage, wherein said microscope stage drive mechanism is detachably securable to said first and second locations.
2. (original) The microscope stage assembly recited in Claim 1 wherein said first location further comprises a rack operatively arranged to engage the microscope stage drive mechanism.
3. (original) The microscope stage assembly recited in Claim 1 wherein said first location further comprising a belt and pulley operatively arranged to engage the microscope stage drive mechanism.
4. (original) The microscope stage assembly recited in Claim 1 wherein said first engagement means further comprising a set screw to detachably secure said stage drive mechanism to said stage.
5. (original) The microscope stage assembly recited in Claim 1 wherein said first engagement means further comprising a spring-loaded ball bearing to detachably secure said stage drive mechanism to said stage.
6. (original) The microscope stage assembly recited in Claim 1 wherein said second location further comprises a rack operatively arranged to engage the microscope stage drive mechanism.
7. (original) The microscope stage assembly recited in Claim 1 wherein said second location further comprising a belt and pulley operatively arranged to engage the microscope stage drive mechanism.

Attorney Docket No. LEAP:125US
U.S. Patent Application No. 10/810,773
Reply to Office Action of March 31, 2006
Date: June 30, 2006

8. (original) The microscope stage assembly recited in Claim 1 wherein said second engagement means further comprising a set screw to detachably secure said stage drive mechanism to said stage.
9. (original) The microscope stage assembly recited in Claim 1 wherein said second engagement means further comprising a spring-loaded ball bearing to detachably secure said stage drive mechanism to said stage.
10. (original) The microscope stage assembly recited in Claim 1 in combination with a microscope.
11. (original) The microscope stage assembly recited in Claim 1 in combination with a microscope stage drive mechanism.
12. (withdrawn) A microscope stage drive mechanism, comprising:
 - an inner drive shaft having a plunger head;
 - an outer drive shaft, arranged coaxially with respect to said inner drive shaft, said outer drive shaft having a pinion; and,
 - a means to detachably secure said microscope stage drive mechanism to a microscope stage.
13. (withdrawn) The drive mechanism recited in Claim 12 wherein said means to detachably secure the drive mechanism further comprises a collar having a groove, wherein said groove is operatively arranged for receipt of an engagement means.
14. (withdrawn) The drive mechanism recited in Claim 12 in combination with a microscope.
15. (withdrawn) The drive mechanism recited in Claim 12 in combination with a microscope stage assembly.
16. (currently amended) An interchangeable microscope stage drive assembly, comprising:
 - a microscope stage; and,
 - a drive mechanism detachably securable positionable to said microscope stage at to more than one location of said stage.

Attorney Docket No. LEAP:125US
U.S. Patent Application No. 10/810,773
Reply to Office Action of March 31, 2006
Date: June 30, 2006

17. (original) The assembly recited in Claim 16 further comprising a set screw to detachably secure said stage drive mechanism to said stage.
18. (original) The assembly recited in Claim 16 further comprising a spring-loaded ball bearing to detachably secure said stage drive mechanism to said stage.
19. (original) The assembly recited in Claim 16 further comprising a belt and pulley operatively arranged to effect lateral movement of a slide holder.
20. (currently amended) The assembly recited in Claim 16 further comprising a rack and pinion operatively arranged to effect lateral movement of said a slider holder.
21. (original) The assembly recited in Claim 16 further comprising a belt and pulley operatively arranged to effect forward and backward movement of said stage.
22. (original) The assembly recited in Claim 16 further comprising a rack and pinion operatively arranged to effect forward and backward movement of said stage.
23. (original) The assembly recited in Claim 16 in combination with a microscope.
24. (withdrawn) The assembly recited in Claim 16, wherein said drive mechanism comprises:
 - an inner drive shaft having a plunger head; and,
 - an outer drive shaft, arranged coaxially with respect to said inner drive shaft, said outer drive shaft having a pinion.
25. (withdrawn) The assembly recited in Claim 24 wherein said plunger head comprises a frustoconical surface.
26. (withdrawn) The assembly recited in Claim 24 wherein said plunger head comprises a cylindrical surface.
27. (withdrawn) The assembly recited in Claim 24 wherein said plunger head comprises a curved surface.
28. (withdrawn) The drive mechanism recited in Claim 24, wherein said plunger head comprises a friction clutch having the ability to slip.

Attorney Docket No. LEAP:125US
U.S. Patent Application No. 10/810,773
Reply to Office Action of March 31, 2006
Date: June 30, 2006

29. (withdrawn) The drive mechanism recited in Claim 24, wherein said plunger head is spring biased to provide an engaging force.
30. (withdrawn) The drive mechanism recited in Claim 24, wherein said plunger head contacts a drive pulley, said pulley mounted for rotation in said microscope stage.
31. (withdrawn) The drive mechanism recited in Claim 24, further comprising a drive member transferring a driving force to said stage.
32. (withdrawn) The drive mechanism recited in Claim 24, in which said outer drive shaft pinion is a gear.
33. (withdrawn) The drive mechanism recited in Claim 24 in combination with a microscope.